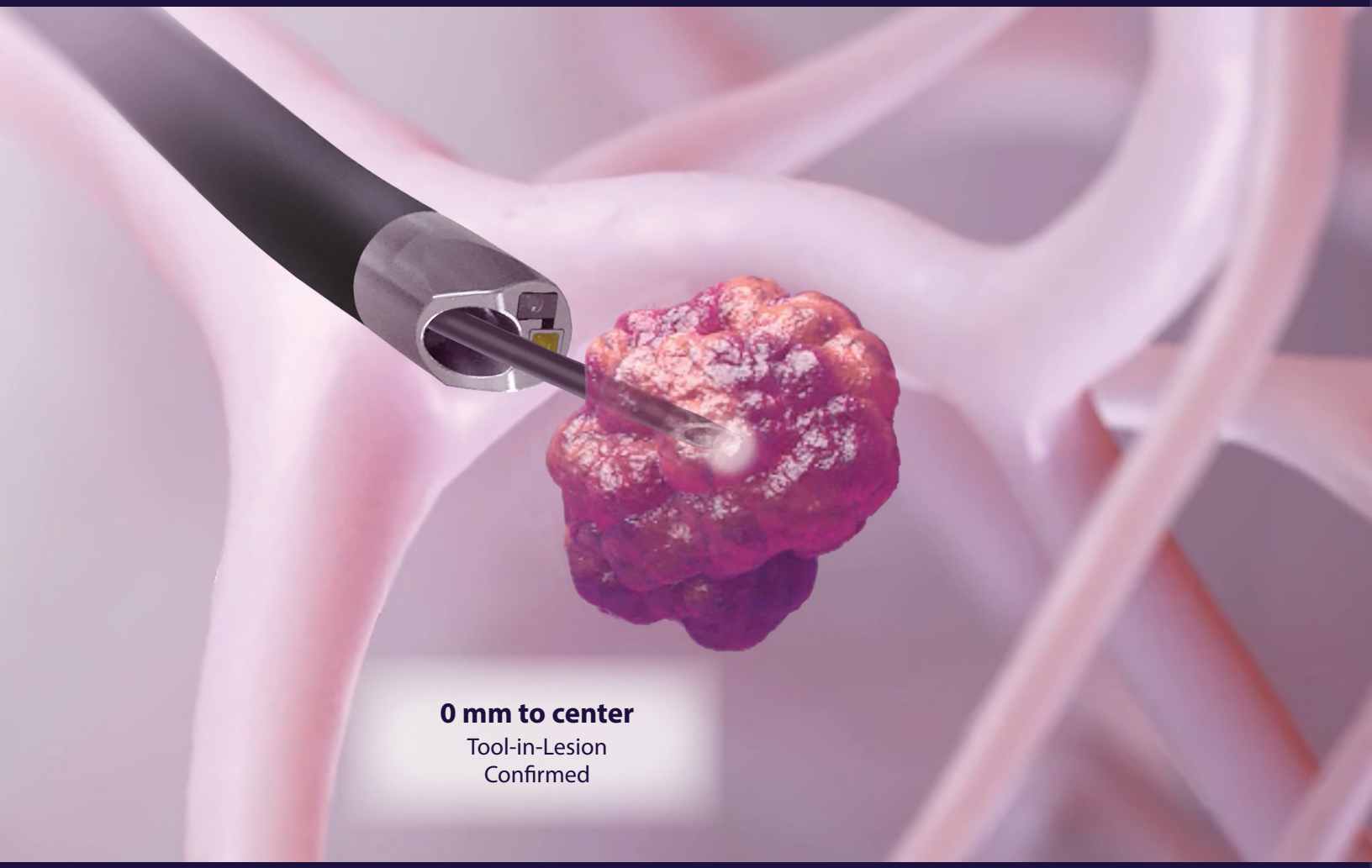
# The Galaxy Experience: **First 90 Cases**

**D. Kyle Hogarth, MD**

Noah Medical

**D. Kyle Hogarth, MD**
Director of Bronchoscopy, Professor of Medicine, University of Chicago

Dr. Hogarth is the first Galaxy System™ user in the United States. He is a co-director of the lung cancer screening program and established the nodule clinic at UCMC. He is a leading expert in pulmonary diseases, specializing in the treatment of lung cancer and minimally invasive diagnosis. A pioneer in the space, he has been and is currently involved in a number of studies, including NAVIGATE, FRONTIER, TARGET and MATCH.




*"A successful biopsy is either a diagnosis of malignancy or of specific or non-specific benign conditions that are biopsied with a confirmed Tool-in-Lesion."*

**— D. Kyle Hogarth, MD**

# Over **500 lung biopsies** annually

I perform most of my lung biopsies using robotic-assisted bronchoscopy. In the recent past, I've used the Monarch™ platform and BodyVision. I've also used Illumisite™ and the superDimension™ navigation system. However, some of the challenges I encountered with these technologies included:

- Inability to accurately reach into the lung periphery
- Failure to overcome CT-to-body divergence, particularly with small lesions
- Absence of integrated imaging
- Tedious reprocessing of scopes, adding time to room turn over between cases

I decided to start using the Galaxy System™ as I anticipated benefits in biopsying peripheral lesions that are smaller in size.

The Galaxy System has the ability to correct for CT-to-body divergence as well as confirm Tool-in-Lesion using tomosynthesis technology by integrating with a variety of C-arms.

It also features augmented fluoroscopy – a virtual representation, in the form of a blue circle, that overlays on the updated target, and offers confidence to the user that the correct lesion in the right location is being targeted.

# Insights from **the first 90 Galaxy System™** procedures

## 110 lesions investigated in 90 patients

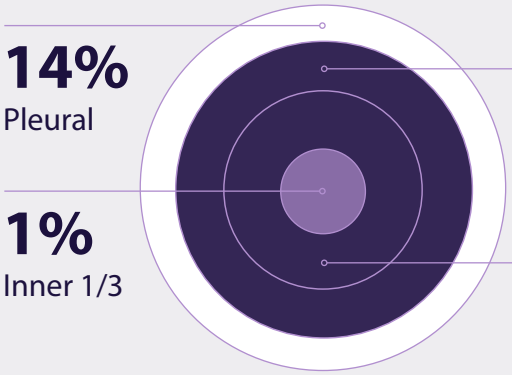
### LESION CHARACTERISTICS

| | |
|---|---|
| **16mm** | average size |
| **81%** | were less than/equal to 20mm |
| **35%** | were less than/equal to 10mm |
| **16%** | were GGOs |
| **65%** | had no bronchus sign |

### PROCEDURE RESULTS

| | |
|---|---|
| **46 mins*** | average procedure time (Scope in – Scope out) |
| **6 mins** | average fluoroscopy time |
| **36 mgy** | average radiation dose |

| LESION LOCATION | Right | Left |
|---|---|---|
| Upper | **36%** | **29%** |
| Middle | **8%** | — |
| Lower | **17%** | **10%** |




**Challenging lesions in challenging locations**
Most lesions were in upper lobes, and outer 1/3

**92% to 96%**
**Diagnostic Yield****

* Several procedures included training sessions that lengthened procedure time
** The range is explained by consideration of results from 3 cases (elaborated below):
- 2 cases resulted in Atypical cells confirmed in final pathology result and are awaiting CT & follow-up
- 1 resulted in inflammation not confirmed in final pathology but stable on CT, and is pending CT surveillance & follow-up

# Case example

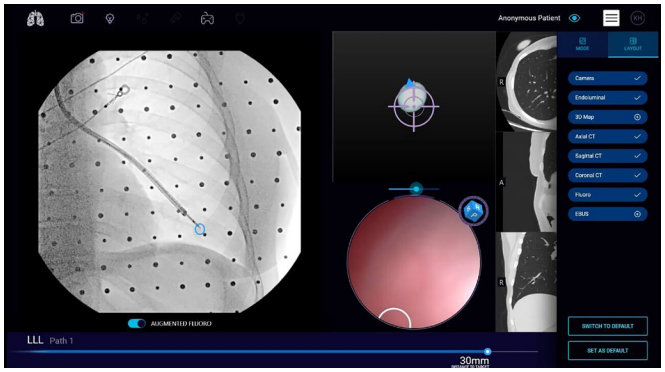
Performed in August 2023

**Presentation:**

- Male patient with suspected colon cancer metastasis. Previous bronchoscopy procedure with competing technology was non-diagnostic.
- Lesion was 9 x 13mm, in the outer 1/3rd of the lung close to the pleura, in the left lower lobe (LLL). Target was marked as 9mm.
- Performed biopsy under breath hold due to lesion being in the LLL, close to the diaphragm.
- No bronchus sign seen.

**Approach:**

- Navigated to the LLL. Total navigation time was 70s. (Registration was only 40s).


- CT-to-body divergence observed. Tomosynthesis technology was used – with GE OEC Elite CFD and the Galaxy System's integrated imaging capability (TiLT) – to correct for the divergence.
- TiLT image looked great and Tool-in-Lesion was confirmed in 3 planes on augmented fluoro. Time from inserting scope to start of biopsy workflow was 10 mins.

**Outcome:**

- Diagnosis of Adenocarcinoma was made using Galaxy System™ on a forceps pass.
- Patient was a candidate for SBRT, so a fiducial was placed in the LLL.

For more information, please visit **noahmed.com**



Noah Medical